

55. The method of claim 54, wherein Fl is selected from the group consisting of naphthyl, anthryl, pyrenyl, phenanthryl, and perylenyl.

56. The method of claim 54, wherein B_{d1} is R₁-B(OH)₂ and B_{d2} is R₂-B(OH)₂, wherein R₁ and R₂ are aliphatic or aromatic functional groups selected independently from each other, and B is a boron atom.

57. The method of claim 56, wherein R₁ and R₂ selected from the group consisting of: methyl, ethyl, propyl, butyl, phenyl, methoxy, ethoxy, butoxy, and phenoxy groups.

58. The method of claim 54, wherein the step of replacing of hydrogen atoms comprises adding orthobromomethyl phenylboronic acid.

59. The method of claim 54, wherein Sp is a straight-chain alkane.

60. The method of claim 54, wherein An comprises an organic functionality.

REMARKS

Minor changes are made to the specification. Claims 1-21 are canceled without prejudice. Claim 33 amended; marked up version of the amended claim is attached hereto pursuant to 37 C.F.R. § 1.121(c)(ii). New claims 40-60 are added. No new matter is introduced. The support for claims 40-60 can be found on page 8, lines 1-15; page 10, lines 5-26; and page 15, lines 5-21. Claims 22-60 are pending in the application.

Entry of this amendment and examination on the merits of this application is respectfully requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number 213-337-6700 to discuss the steps necessary for placing the application in condition for allowance.

Respectfully submitted,

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Version with markings to show changes made:

IN THE SPECIFICATION:

Please replace the text of the last paragraph on page 4 and the first paragraph on page 5 with the following text:

In the above formula, Fl is a fluorophore, N is a nitrogen atom, Bd1 and Bd2 are independently selected binding groups, Sp is an aliphatic spacer, and An is an anchor group for attaching the sensor to solid substrates. n, m, x, and y are integers, where n = 1 or 2, m = 1 or 2, and y = 1 or 2 [x is an integer]. The binding groups are capable of binding an analyte molecule to form a stable 1:1 complex. Examples of binding groups include, but are not limited to, [one] boronic acid, [one] crown ether, and aza-crown [ethers] ether, such as 1,4,7,10,13-Pentaoxa-16-aza-cyclooctadecane (aza 18-crown-6) and 1,4,7,13-tetraoxa-10-aza-cyclohexadecane (aza 15-crown-5). In a preferred embodiment, the Bd1 is R1-B(OH)2 and Bd2 is R2-B(OH)2. R1 and R2 are aliphatic or aromatic functional groups selected independently from each other and B is a boron atom.

Please replace the text of the first full paragraph on page 8 with the following text:

In the present invention, the binding groups may be any functional groups, as long as they provide the desired specific binding of the analyte to the sensor with a formation of 1:1 complex. The binding groups are preferably electron deficient groups. The electron deficiency governs the shift of the unshared electron pair from the nitrogen atoms to the binding group when specifically binding the analyte. Examples of the acceptable binding groups include, but are not limited to, [one] boronic acid, [one] crown ether, and aza-crown [ethers] ether, such as 1,4,7,10,13-Pentaoxa-16-aza-cyclooctadecane (aza 18-crown-6) and 1,4,7,13-tetraoxa-10-aza-cyclohexadecane (aza 15-crown-5). Examples of analytes that may be identified by